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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,488	08/30/2001	Hans-Helmut Bechtel	DE 000132	8003

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EXAMINER

ROY, SIKHA

ART UNIT PAPER NUMBER

2879

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/942,488

Applicant(s)

BECHTEL ET AL.

Examiner

Sikha Roy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

The Amendment, filed on July 31, 2003 has been entered and is acknowledged by the Examiner.

#### ***Specification***

The disclosure is objected to because of the following informalities:

As provided in 37CFR 1.77(b) the specification should include following sections, each one with proper section headings such as 'Title of the Invention', 'Background of the Invention', 'Summary of the Invention', 'Brief Description of Drawing', 'Detailed Description of the Invention', 'Claims' and 'Abstract'.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 - 3, 7 - 9 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,998,918 to Do et al.

Referring to claims 1 and 2 Do et al. disclose (column 1 lines 58-67, column 2 lines 1-25) a phosphor screen for a color CRT comprising double phosphor layer the first layer with preferred blue phosphor ZnS: Ag and the second layer with UV phosphor

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wavelength of the emitted light from the second layer being 300-420nm. The first layer of ZnS: Ag (conventional blue phosphor) inherently emits light in the wavelength range of 400-490 nm having a peak at wavelength 450nm. It is elementary that mere recitation of a newly discovered property, inherently possessed by things in the prior art, does not cause a claim drawn to distinguish over the prior art. Additionally, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an inherent characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on. Regarding the limitation of 'visible' light emission by the second phosphor, the Examiner notes that Do discloses the wavelength of the light emitted by the second phosphor is 300-420 nm which overlaps the claimed range and hence the light emitted is in the visible spectrum.

Regarding claim 3 Do et al. disclose the second phosphor is selected from the group consisting of  $\text{Ce}^{3+}$ -activated phosphors.

Regarding claim 7 Do et al. disclose (column 3 lines 29,30) that the color screen is characterized in that the layer comprising ZnS: Ag is coated as base (first) layer and then the layer comprising UV phosphor is coated as second layer.

Referring to claim 8 Do et al. disclose the first phosphor is ZnS: Ag.

Regarding claim 9 Do et al. disclose (claims 1,2) the phosphor screen with blue phosphor layer comprising two layers is used for a flickerless cathode ray tube.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,998,918 to Do et al. and further in view of JP 2-120389 to Hagiwara et al. and U.S. Patent 6,010,644 to Fu et al.

Claim 4 differs from Do et al. in that Do et al. do not disclose the second phosphor chosen from the group consisting of  $\text{Sr}_2\text{P}_2\text{O}_7$ : Eu.

Hagiwara discloses the second blue phosphor having light emission peak at 410-430nm in the fluorescent screen for a fluorescent lamp comprising of  $\text{Eu}^{2+}$  activated  $\text{Sr}_2\text{P}_2\text{O}_7$  for not undergoing reduction in luminous flux or change in chromaticity after using for a long time. Fu et al. in pertinent art of phosphor disclose (column 1 lines 5-15) that phosphors producing fluorescence in a fluorescent lamp can be used in a cathode ray tube.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include  $\text{Eu}^{2+}$  activated  $\text{Sr}_2\text{P}_2\text{O}_7$  in the second layer of phosphor of Do et al. so that the screen does not undergo reduction in luminous flux or change in chromaticity after using for a long time.

Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,998,918 to Do et al. and further in view of JP 2-135276 to Hitachi Ltd.

Claim 5 differs from Do et al. in that Do et al. do not specify the phosphor layer comprising mixture of particles of first phosphor and second phosphor.

JP 2-135276 discloses mixing of the two phosphor particles (first blue phosphor of ZnS: Ag and a second blue phosphor) in a blue-color projecting cathode ray tube resulting in improved luminance in range of high electron beam current.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to modify the two layers of first and second phosphors of Do et al. by a phosphor layer comprising mixture of the phosphor particles as suggested by JP 2-135276 for providing improved luminance in range of high electron beam current.

Regarding claim 6 JP-2-135276 discloses the mixture containing 70% by weight of the first phosphor and 30% by weight of the second phosphor.

### ***Response to Arguments***

Applicant's arguments filed July 31, 2003 have been fully considered but are not persuasive.

In response to applicant's argument that Do et al. do not suggest color picture screen defined in claim 1, the Examiner respectfully disagrees. Do discloses the phosphor screen for a color cathode ray tube having a blue phosphor layer formed of double phosphor layers, first layer with preferred blue phosphor ZnS: Ag, inherently emitting light in the wavelength range of 400-490 nm and the second layer with a phosphor emitting light of wavelength in the range of 300-420nm.

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In response to applicant's argument that Do teaches a phosphor which does not have visual light emission the Examiner notes that Do discloses the range of wavelength of the light emitted by the second phosphor is 300-420 nm which overlaps the claimed range and hence the light emitted is in the visible spectrum.

Regarding claim 3 Do et al. indeed disclose the second phosphor selected from a group comprising Ce activated phosphor.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 4,604,550 to Van Koesveld et al. discloses Terbium activated blue luminescing phosphor.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (703) 308-2826. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*S.R.*

Sikha Roy  
Patent Examiner  
Art Unit 2879

  
VIP PATEL  
PRIMARY EXAMINER